

MODULE VI

SHORT-TERM INCINERATION

VI. This module covers the incineration shakedown; trial burn and post trial burn periods. For clarity, the incinerator systems are organized in this module as follows:

Section VI.A. - Metal Parts Furnace (MPF)
Section VI.B. - Liquid Incinerator (LIC)

VI.A. METAL PARTS FURNACE (MPF)

VI.A.1. Shakedown

VI.A.1.a. The shakedown period shall begin with the introduction of the principal organic hazardous constituent (POHC) into the MPF system and shall end with the start of the specific MPF trial burn or compliance test. There shall be a separate shakedown period for each of the following hazardous wastes:

- i. Chemical Agent GB
- ii. Chemical Agent VX
- iii. Mustard Agents H/HD/HT
- iv. Surrogate (Miscellaneous Agent Contaminated Wastes)

VI.A.1.b. Duration of the Shakedown Periods

Each shakedown period shall not exceed 720 hours of operation. The Permittee may petition the Executive Secretary for one extension of the shakedown period for up to 720 additional hours for each test in accordance with R315-8-15.5(c)(1).

VI.A.1.c. Waste Feed Limitations

VI.A.1.c.i. The Permittee shall not feed the following wastes to the MPF:

1. RCRA Hazardous Wastes F020 through F023, F026, and F027.
2. Any wastes containing polychlorinated biphenyls.
3. Any hazardous waste not allowed by this permit.

VI.A.1.c.ii. During the shakedown periods the Permittee shall not exceed the following waste feed rates to the MPF:

| DESCRIPTION OF HAZARDOUS WASTES | MAXIMUM FEED PER FURNACE CHARGE (POUNDS) | MINIMUM TIME BETWEEN FURNACE CHARGES (MINUTES) |
|---|---|---|
| Chemical Agent GB | 130 | 86 |
| Chemical Agent VX | 45 | 80 |
| Mustard Agents H / HD / HT | 130 ¹ | 80 ¹ |
| Decontamination Solutions | 130 | 80 |
| Simulant and Surrogate Materials | 200 ¹ | 80 ¹ |
| 1. To be finalized in approved trial burn plan or compliance test plan. | | |

- VI.A.1.c.iii. Only chemical agents that have been successfully demonstrated during an approved trial burn, identified in an approved shakedown and trial burn plan, or wastes contaminated with such agents, shall be treated in the MPF. Wastes contaminated with more than one agent shall require exhaust stack monitoring for each agent type being treated in accordance with Condition VI.A.1.g.iii.
- VI.A.1.c.iv. Only one-ton container, spray tank or loaded tray containing the waste material shall be fed into the MPF at any given time.
- VI.A.1.c.v. The number of munitions fed to the MPF at one time shall not exceed the amounts identified in the approved trial burn or compliance test plan.
- VI.A.1.c.vi. Non-munition agent solid contaminated wastes may only be treated in the MPF at the conclusion of a trial burn or compliance test.
- VI.A.1.c.vii. Decontamination solutions shall only be batch fed to the primary combustion chamber of the MPF in accordance with the feed rates specified in Condition VI.A.1.c.ii. The wastes shall remain in the MPF for at least 80 minutes.
- VI.A.1.c.viii. Agent contaminated liquid wastes shall only be processed as a batch feed to the primary combustion chamber of the MPF at the conclusion of a trial burn or compliance test.
- VI.A.1.c.ix. Hazardous wastes shall not be fed to the secondary combustion chamber of the MPF.
- VI.A.1.c.x. If current trial burn data is not sufficient to support the GB, VX and Mustard Screening Risk Assessment (SRA) for the Deseret Chemical Depot, at least one compliance test run for each agent shall be conducted to verify stack emissions at the proposed long term incineration feed rates and operating conditions. The Executive Secretary will issue a letter to describe the additional testing requirements.
- VI.A.1.c.xi. During waste processing in the MPF, operation and monitoring of the discharge enclosure shall be conducted in accordance with Conditions V.A.7.e., V.A.8.d., and Attachment 2 – section 2.2.2.6.
- VI.A.1.d. Operating Conditions

- VI.A.1.d.i. During the shakedown periods, the Permittee shall operate the MPF furnace system in accordance with the approved trial burn or compliance test plan.
- VI.A.1.d.ii. The temperature of the two zones of the primary chamber shall be maintained at or above 950 °F, but shall not exceed 1,750 °F.
- VI.A.1.d.iii. The MPF secondary combustion chamber temperature shall be maintained at or above 1,450 °F, but shall not exceed 2,175 °F
- VI.A.1.d.iv. Carbon monoxide concentrations, monitored in the exhaust stack and corrected to 7% oxygen in accordance with the formula specified below, shall not exceed 100 parts per million, dry volume, over a one-hour rolling average.
- $$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$
- Where:
- CO_c = corrected CO ppm (dry volume)
 CO_m = measured CO ppm (dry volume)
 O_m = measured % O₂ (dry volume)
- VI.A.1.d.v. Oxygen concentration in the exhaust stack shall be maintained at or above 3%, but shall not exceed 18% on a dry volume basis.
- VI.A.1.d.vi. The gas flow rate in the MPF exhaust stack shall be maintained between 6,500 and 13,600 ACFM.
- VI.A.1.d.vii. The Permittee shall control fugitive emissions from the primary combustion zones of the MPF by maintaining a vacuum in the primary combustion chambers whenever the furnace exit door is closed.
- VI.A.1.d.viii. The Venturi scrubber exhaust gas temperature shall not exceed 190 °F.
- VI.A.1.d.ix. Exhaust gas pressure drop across the venturi scrubber shall be maintained at or above 20 inches of water column.
- VI.A.1.d.x. Clear liquor flow rate to the scrubber tower shall be maintained at or above 150 gpm.
- VI.A.1.d.xi. Scrubber brine feed rate to the venturi shall be maintained at or above 30 gallons per minute.
- VI.A.1.d.xii. The clear liquor and the scrubber brine shall be continuously monitored and maintained at a pH of 7.0 or above.
- VI.A.1.d.xiii. During an agent shakedown period, the Permittee shall continuously monitor and control the agent emissions from the MPF system. The emission levels from each monitoring system shall not exceed the concentrations specified in Condition V.A.2.f.
- VI.A.1.d.xiv. Waste munitions and hazardous waste materials shall remain in the furnace as specified in Condition VI.A.1.c.ii. During this period, the primary and secondary combustion chamber temperatures shall be automatically controlled within the limits specified in the Short Term Incineration Module of this permit.

- VI.A.1.d.xv. Information gained during the shakedown period may demonstrate the need to change these operating conditions prior to the trial burn. The Executive Secretary shall notify the Permittee in writing if these operating conditions will change or additional operating parameters will be added to this section.
- VI.A.1.e. Waste Feed Cut-Off Requirements
- VI.A.1.e.i. The Permittee shall define the waste feed cut-off (WFCO) instruments in each individual trial burn plan. A table shall be included that identifies the instrument number; the operating parameter and the WFCO set point. These set points shall be enforceable for the shakedown; trial burn and post trial burn periods. When the waste feed cut-off table is approved as part of the trial burn plan, the waste feed cut-off TAG ID's and associated set points shall be incorporated into Table 15.6 in Attachment 15.
- VI.A.1.e.ii. Hazardous wastes shall not be fed to the MPF if any of the waste feed cut-off instruments listed in Table 15.6 in Attachment 15 fail to operate as designed.
- VI.A.1.e.iii. In the event of a malfunction of an automatic waste feed cut-off instrument, the Permittee shall immediately stop the hazardous waste feed to the MPF and correct the malfunction prior to resuming feed.
- VI.A.1.e.iv. During the shakedown and post trial periods, all waste feed cut-off instrumentation shall be tested at least every 14 calendar days when wastes are being treated in the MPF.
- VI.A.1.f. Inspection Requirements
- VI.A.1.f.i. The Permittee shall inspect the MPF in accordance with the Inspection Schedule, Attachment 5.
- VI.A.1.f.ii. Prior to a trial burn or compliance test, DSHW shall be given the opportunity to witness the MPF WFCO test to verify the alarm set points for each instrument in Table 15.6.
- VI.A.1.g. Monitoring Requirements
- VI.A.1.g.i. The Permittee shall maintain and calibrate the monitoring and recording equipment as specified in Attachments 3, 16 and 17.
- VI.A.1.g.ii. Data from the CEMS, NRT and DAAMS monitors will be used to verify operating parameters and stack emissions.
- VI.A.1.g.iii. The MPF Stack shall be continuously monitored, by both NRT monitors and DAAMS, at the SEL level for all agents being processed in the facility. The MPF exhaust stack shall have two staggered NRT monitors with differing columns and two identical NRT monitors for backup, so there is one NRT detector continuously sampling the MPF stack gases at all times whenever hazardous wastes are being fed to the furnace system. DAAMS are used as confirmation for any NRT alarms above the action level. A Waste Feed Cutoff for the MPF is initiated when: 1) there is an alarm at or above the 0.2 SEL action level, or 2) when the NRT monitoring systems are not continuously sampling the stack gases.

VI.A.1.h.i. Record keeping

VI.A.1.h.i. The Permittee shall comply with the Record keeping requirements as specified in Condition II.H.

VI.A.1.h.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the MPF. All NRT monitor readings shall be recorded in the data acquisition system.

VI.A.2. Trial Burn Period

VI.A.2.a. Trial Burn Plan Submittal

VI.A.2.a.i. Individual trial burn and compliance test plans listed in Condition VI.A.1.a. shall be submitted by the Permittee as separate permit modifications. These trial burn and compliance test plans shall define the operating conditions and waste feed rates that will be used to determine incinerator performance in accordance with R315-8-15.4.

VI.A.2.a.ii. The Permittee may not start shakedown period in the MPF furnace system until the Executive Secretary approves the trial burn or compliance test plan.

VI.A.2.b. Conformity to Trial Burn Plans

The Permittee shall operate, monitor and test the incinerator systems during the trial burn or compliance test period as specified in the approved trial burn or compliance test plan.

VI.A.2.c. Trial Burn Determinations

VI.A.2.c.i. The Permittee shall make the following performance determinations during each trial burn test:

| Performance Standards | Trial Burn Test |
|--|--|
| Minimum DREs for Chemical Agents | 99.99% |
| Minimum DREs for Surrogate POHCs | 99.9999% |
| Particulate Matter Emission Limit | 0.08 grain per Dry Standard Cubic Foot (DSCF), corrected to 7% O ₂ |
| Hydrogen Chloride (HCl) Emission Limit | 4 lbs/hr or 1% of the HCl in the stack gas prior to entering any pollution control equipment |
| Toxic Metals Emission Limits | Tier III Health Risk Assessment |
| CO Emission Limit, 60 Minute Rolling Average | 100 ppmv at 7% O ₂ |
| Chemical Agents Emission Limits | As specified in V.A.2.f. |

VI.A.2.c.ii. Surrogate and miscellaneous waste trial burn tests shall meet the performance standard of VI.A.2.c.i.

- VI.A.2.c.iii. The Permittee may use Cr⁺⁶ test data during the trial burn to quantify the amount of the total chromium.
- VI.A.2.d. Trial Burn Data Submissions and Certifications
- VI.A.2.d.i. After each individual trial burn test or fuel only run, the Permittee shall submit a summary of all field data sheets collected during the trial burn to the DSHW test representative within two calendar days.
- VI.A.2.d.ii. The Permittee shall submit to the Executive Secretary a complete trial burn or compliance test report within 90 calendar days of completion of the tests. All submissions shall be certified in accordance with R315-3-8.
- VI.A.2.d.iii. If the preliminary calculations show that one or more of the performance standards listed in Condition VI.A.2.c. failed during the trial burn, the Permittee shall immediately stop waste feed to the incinerator system. The Executive Secretary shall be verbally notified within 24 hours of this discovery. As necessary, a revised post trial burn feed rate can be approved to dispose of the remaining hazardous waste present in the MPF treatment building and tank systems during this discovery.
- VI.A.2.e. Monitoring Requirements
- All continuous emission monitoring will follow the requirements specified in the trial burn plan and Table 15.7 in Attachment 15.
- VI.A.2.f. Record keeping
- VI.A.2.f.i. The Permittee shall comply with the Record keeping requirements in specified in the approved trial burn or performance test plan.
- VI.A.2.f.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the MPF. All NRT monitor readings shall be recorded in the data acquisition system.
- VI.A.2.g. During waste processing in the MPF, operation and monitoring of the discharge enclosure shall be conducted in accordance with Conditions V.A.7.e., V.A.8.d., and Attachment 2 – section 2.2.2.6.
- VI.A.3. Post Trial Burn Period**
- During the post trial burn or compliance test period, in accordance with R315-8-15.5(c)(3), and for the minimum period sufficient for the Permittee to analyze samples, compute data, and submit trial burn results, and for the Executive Secretary to review the trial burn results and make any modifications necessary to the permit, the Permittee shall comply with the conditions in the section. Items with asterisks (*) will be determined by the trial burn results.
- VI.A.3.a. Waste Feed Limitations

- VI.A.3.a.i. During any post trial burn period, the Permittee shall incinerate the chemical agent or miscellaneous waste that has been represented during the preceding trial burn, at no more than 50 percent of the maximum feed rates (quantity and pounds per batch feed, including combustible and non-combustible solids, BTU, ash, total liquids, and chlorine feeds) demonstrated during that test. Chemical agent wastes that have successfully passed a trial burn can continue to be treated as specified in Module V, Long Term Incineration.
- VI.A.3.a.ii. Only chemical agents that have been successfully demonstrated during an approved trial burn, identified in an approved shakedown and trial burn plan, or wastes contaminated with such agents, shall be treated in the MPF. Wastes contaminated with more than one agent shall require exhaust stack monitoring for each agent type being treated in accordance with Condition VI.A.3.e.iii.
- VI.A.3.a.iii. Only one-ton container, spray tank or loaded tray containing the waste material shall be fed into the MPF at any given time.
- VI.A.3.a.iv. Agent contaminated non-munition solid wastes (examples of which are found in Table 15.5) shall only be processed as a batch feed to the primary combustion chamber of the MPF. The maximum amount of non-munition solid wastes fed to the MPF shall not exceed 50 percent of the maximum feed weight demonstrated during the latest trial burn, the minimum time interval between batch feeds shall be 80* minutes, and the wastes shall remain in the MPF for at least 120* minutes.
- VI.A.3.a.v. Decontamination solutions shall only be batch fed to the primary combustion chamber of the MPF in accordance with the feed rates specified in Condition VI.A.1.c.ii. The wastes shall remain in the MPF for at least 80* minutes.
- VI.A.3.a.vi. Agent contaminated liquid wastes (examples of which are found in Table 15.5) shall only be processed as a batch feed to the primary combustion chamber of the MPF. The maximum amount of feed per furnace charge shall not exceed 50 percent of the liquid feed weight demonstrated in the latest trial burn. Minimum time interval between these batch furnace feeds shall be no less than 80* minutes and the waste shall remain in the MPF for at least 80* minutes.
- VI.A.3.a.vii. Munitions and chemical agent wastes shall not be placed in the MPF the same time non-munition agent contaminated debris is being treated in this furnace.
- VI.A.3.a.viii. All non-munition wastes that envelop an interior space (e.g. gauges, cans, escape air tanks, over packs, glassware, etc.) must be opened or punctured before being placed in the MPF.
- VI.A.3.a.ix. During waste processing in the MPF, operation and monitoring of the discharge enclosure shall be conducted in accordance with Conditions V.A.7.e., V.A.8.d., and Attachment 2 – section 2.2.2.6.
- VI.A.3.b. Operating Conditions

The Permittee shall not treat any hazardous waste in the MPF during the post trial burn period or compliance test unless the operating conditions in section VI.A.1.d. are in compliance.

VI.A.3.c. Waste Feed Cut-Off Requirements

VI.A.3.c.i. The Permittee shall comply with the waste feed cut-off instrument settings as specified in Table 15.6 in Attachment 15.

VI.A.3.c.ii. Hazardous wastes shall not be fed to MPF if any of the waste feed cut-off instruments listed in the specific trial burn plan fails to operate properly.

VI.A.3.c.iii. In the event of a malfunction of an automatic waste feed cut-off instrument, the Permittee shall immediately stop the hazardous waste feed to the MPF and correct the malfunction prior to resuming feed.

VI.A.3.c.iv. All instrumentation shall be maintained and tested in accordance with Condition VI.A.1.e.iv.

VI.A.3.d. Inspection Requirements

The Permittee shall inspect the MPF in accordance with the Inspection Schedule, Attachments 5.

VI.A.3.e. Monitoring Requirements

VI.A.3.e.i. The Permittee shall maintain and calibrate the monitoring recording equipment as specified in Attachment 16 and 17.

VI.A.3.e.ii. Data from the CEMS, NRT and DAAMS monitors will be used to verify operating parameters and stack emissions.

VI.A.3.e.iii. The MPF Stack shall be continuously monitored, by both NRT monitors and DAAMS, at the SEL level for all agents being processed in the facility. The MPF exhaust stack shall have two staggered NRT monitors with differing columns and two identical NRT monitors for backup, so there is one NRT detector continuously sampling the MPF stack gases at all times whenever hazardous wastes are being fed to the furnace system. DAAMS are used as confirmation for any NRT alarms above the action level. A Waste Feed Cutoff for the MPF is initiated when: 1) there is an alarm at or above the 0.2 SEL action level, or 2) when the NRT monitoring systems are not continuously sampling the stack gases.

The Permittee shall not process GA until the Executive Secretary approves a baseline and precision & accuracy study for GA monitoring.

VI.A.3.f. Record Keeping

VI.A.3.f.i. The Permittee shall comply with the Record keeping requirements in Condition II.H.

VI.A.3.f.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the MPF. All NRT monitor readings shall be recorded in the data acquisition system.

VI.B. LIQUID INCINERATOR (LIC)

VI.B.1. Shakedown

VI.B.1.a. The shakedown period shall begin with the introduction of the principal organic hazardous constituent (POHC) into the LIC system and shall end with the start of the specific LIC trial burn or compliance test. There shall be a separate shakedown period for each of the following hazardous wastes:

- i. Chemical Agent GB
- ii. Chemical Agent VX
- iii. Mustard Agents H/HD/HT
- iv. Surrogate (Miscellaneous Agent Contaminated Wastes)

VI.B.1.b. Duration of the Shakedown Periods

Each shakedown period shall not exceed 720 hours of operation. The Permittee may petition the Executive Secretary for one extension of the shakedown period for up to 720 additional hours for each test in accordance with R315-8-15.5(c)(1).

VI.B.1.c. Waste Feed Limitations

VI.B.1.c.i. The Permittee shall not feed the following wastes to the LIC:

- 1. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.
- 2. Any wastes containing polychlorinated biphenyls.
- 3. Any hazardous waste not allowed by this permit.

VI.B.1.c.ii. During the shakedown periods the Permittee shall not exceed the following waste feed rates to the LIC:

| DESCRIPTION OF HAZARDOUS WASTES | MAXIMUM FEED TO THE PRIMARY COMBUSTION CHAMBER (LBS/HOUR) | MAXIMUM FEED TO THE SECONDARY COMBUSTION CHAMBER (LBS/HOUR) |
|------------------------------------|--|--|
| Chemical Agent GB | 300 ¹ | 0 |
| Chemical Agent VX | 240 ¹ | 0 |
| Mustard Agents H / HD / HT | 300 ¹ | 0 |
| Surrogate Materials | 380 ¹ | 0 |
| Decontamination Solutions | 0 | 180 ¹ |
| Agent Contaminated Liquid Wastes | 120 ¹ | 0 |

| DESCRIPTION OF HAZARDOUS WASTES | MAXIMUM FEED TO THE PRIMARY COMBUSTION CHAMBER (LBS/HOUR) | MAXIMUM FEED TO THE SECONDARY COMBUSTION CHAMBER (LBS/HOUR) |
|---|--|--|
| 1. To be finalized in approved trial burn plan or compliance test plan. | | |

- VI.B.1.c.iii. Only one type of waste shall be fed to the LIC primary combustion chamber at a time.
- VI.B.1.c.iv. Decontamination solution may be fed to the LIC secondary combustion chamber, with or without waste feed to the primary combustion chamber.
- VI.B.1.c.v. If current trial burn data is not sufficient to support the GB, VX and Mustard Screening Risk Assessment (SRA) for the Deseret Chemical Depot, at least one compliance test run for each agent shall be conducted to verify stack emissions at the proposed long term incineration feed rates and operating conditions. The Executive Secretary will issue a letter to describe the additional testing requirements.
- VI.B.1.d. Operating Conditions
- VI.B.1.d.i. During the shakedown periods, the Permittee shall operate the LIC furnace system in accordance with the approved trial burn or compliance test plan. Operating conditions in those plans shall not exceed the limits specified in this section.
- VI.B.1.d.ii. The temperature of the primary combustion chamber shall be maintained at or above 2,300 °F, but shall not exceed 3,100 °F.
- VI.B.1.d.iii. The LIC secondary combustion chamber temperature shall be maintained at or above 1,800 °F, but shall not exceed 2,600 °F
- VI.B.1.d.iv. Carbon monoxide concentrations, monitored in the exhaust stack and corrected to 7% oxygen in accordance with the formula specified below, shall not exceed 100 parts per million, dry volume, over a one-hour rolling average.
- $$CO_c = CO_m \times (21 - 7)/(21 - O_m)$$
- Where:
- CO_c = corrected CO ppm (dry volume)
- CO_m = measured CO ppm (dry volume)
- O_m = measured % O_2 (dry volume)
- VI.B.1.d.v. Oxygen concentration in the exhaust stack shall be maintained at or above 3%, but shall not exceed 15% on a dry volume basis.
- VI.B.1.d.vi. The gas flow rate in the LIC exhaust stack shall be maintained between 6,500 and 13,600 ACFM.
- VI.B.1.d.vii. The Permittee shall control fugitive emissions from the primary combustion zones of the LIC by maintaining a vacuum in the primary combustion chamber.

- VI.B.1.d.viii. The Venturi scrubber exhaust gas temperature shall not exceed 190 °F.
- VI.B.1.d.ix. Exhaust gas pressure drop across the venturi scrubber shall be maintained at or above 20 inches of water column.
- VI.B.1.d.x. Clear liquor flow rate to the scrubber tower shall be maintained at or above 150 gpm.
- VI.B.1.d.xi. Scrubber brine feed rate to the venturi shall be maintained at or above 30 gallons per minute.
- VI.B.1.d.xii. The clear liquor and the scrubber brine shall be continuously monitored and maintained at a pH of 7.0 or above.
- VI.B.1.d.xiii. During an agent shakedown period, the Permittee shall continuously monitor and control the agent emissions from the LIC system. The emission levels from each monitoring system shall not exceed the concentrations specified in Condition V.B.2.f.
- VI.B.1.d.xiv. Information gained during the shakedown period may demonstrate the need to change these operating conditions prior to the trial burn. The Executive Secretary shall notify the Permittee in writing if these operating conditions will change or additional operating parameters will be added to this section.
- VI.B.1.e. Waste Feed Cut-Off Requirements
- VI.B.1.e.i. The Permittee shall define the waste feed cut-off (WFCO) instruments in each individual trial burn or compliance test plan. A table shall be included that identifies the instrument number; the operating parameter and the WFCO set point. These set points shall be enforceable for the shakedown; trial burn and post trial burn periods. When the waste feed cut-off table is approved as part of the trial burn plan, the waste feed cut-off TAG ID's and associated set points shall be incorporated into Table 15.8 in Attachment 15 of this permit.
- VI.B.1.e.ii. Hazardous wastes shall not be fed to the LIC if any of the waste feed cut-off instruments listed in Table 15.8 in Attachment 15 fail to operate as designed.
- VI.B.1.e.iii. In the event of a malfunction of an automatic waste feed cut-off instrument, the Permittee shall immediately stop the hazardous waste feed to the LIC and correct the malfunction prior to resuming feed.
- VI.B.1.e.iv. During the shakedown and post trial periods, all waste feed cut-off instrumentation shall be tested at least every 14-calender days when wastes are being treated in the LIC.
- VI.B.1.f. Inspection Requirements
- VI.B.1.f.i. The Permittee shall inspect the LIC in accordance with the Inspection Schedule, Attachments 5.
- VI.B.1.f.ii. Prior to a trial burn or compliance test, DSHW shall be given the opportunity to witness the LIC WFCO test to verify the alarm set points for each instrument in Table 15.8.

VI.B.1.g. Monitoring Requirements

- VI.B.1.g.i. The Permittee shall maintain and calibrate the monitoring and recording equipment as specified in Attachments 3, 16 and 17.
- VI.B.1.g.ii. Hazardous wastes shall not be fed to the LIC if any of the waste feed cut-off instruments listed in the specific trial burn plan fail to operate as designed.
- VI.B.1.g.iii. The LIC shall be continuously monitored, by both NRT monitors and DAAMS, at the SEL level for all agents being processed in the facility. The LIC shall have two staggered NRT monitors with differing columns and two identical NRT monitors for backup, so there is one NRT detector continuously sampling the LIC gases at all times whenever hazardous wastes are being fed to the furnace system. DAAMS are used as confirmation for any NRT monitor alarms above the action level. A Waste Feed Cutoff for the LIC is initiated when: 1) there is an alarm at or above the 0.2 SEL action level, or 2) when the NRT monitoring systems are not continuously sampling the stack gases.

VI.B.1.h. Record keeping

- VI.B.1.h.i The Permittee shall comply with the Record keeping requirements as specified in Condition II.H.
- VI.B.1.h.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the LIC. All NRT monitor readings shall be recorded in the data acquisition system.

VI.B.2. Trial Burn Period

VI.B.2.a. Trial Burn Plan Submittal

- VI.B.2.a.i. Individual trial burn and compliance test plans listed in Condition VI.B.1.a. shall be submitted by the Permittee as separate permit modifications. These trial burn and compliance test plans shall define the operating conditions and waste feed rates that will be used to determine incinerator performance in accordance with R315-8-15.4.
- VI.B.2.a.ii. The Permittee may not start shakedown period in the LIC furnace system until the Executive Secretary approves the trial burn or compliance test plan.

VI.B.2.b. Conformity to Trial Burn Plans

The Permittee shall operate, monitor and test the incinerator systems during the trial burn or compliance test period as specified in the approved trial burn or compliance test plan.

VI.B.2.c. Trial Burn Determinations

- VI.B.2.c.i. The Permittee shall make the following performance determinations during each trial burn test:

| Performance Standards | Trial Burn Test |
|-----------------------|-----------------|
|-----------------------|-----------------|

| Performance Standards | Trial Burn Test |
|--|--|
| Minimum DREs for Chemical Agents and Surrogate POHCs | 99.9999% |
| Particulate Matter Emission Limit | 0.08 grain per Dry Standard Cubic Foot (DSCF), corrected to 7% O ₂ |
| Hydrogen Chloride (HCl) Emission Limit | 4 lbs/hr or 1% of the HCl in the stack gas prior to entering any pollution control equipment |
| Toxic Metals Emission Limits | Tier III Health Risk Assessment |
| CO Emission Limit, 60 Minute Rolling Average | 100 ppmv at 7% O ₂ |
| Chemical Agents Emission Limits | As specified in V.B.2.f. |

- VI.B.2.c.ii. Surrogate and miscellaneous waste trial burn tests shall meet the performance standard of VI.B.2.c.i.
- VI.B.2.c.iii. The Permittee may use Cr⁺⁶ test data during the trial burn to quantify the amount of the total chromium.
- VI.B.2.d. Trial Burn Data Submissions and Certifications
- VI.B.2.d.i. After each individual trial burn test or fuel only run, the Permittee shall submit a summary of all field data sheets collected during the trial burn to the DSHW test representative within two calendar days.
- VI.B.2.d.ii. The Permittee shall submit to the Executive Secretary a complete trial burn or compliance test report within 90 calendar days of completion of the tests. All submissions shall be certified in accordance with R315-3-8.
- VI.B.2.d.iii. If the preliminary calculations show that one or more of the performance standards listed in Condition VI.B.2.c. failed during the trial burn, the Permittee shall immediately stop waste feed to the incinerator system. The Executive Secretary shall be verbally notified within 24 hours of this discovery. As necessary, a revised post trial burn feed rate can be approved to dispose of the hazardous waste present in the LIC treatment building and tank systems during this discovery.
- VI.B.2.e. Monitoring Requirements
- . All continuous emission monitoring will follow the requirements specified in the trial burn plan and Table 15.9 in Attachment 15.
- VI.B.2.f. Record Keeping
- VI.B.2.f.i. The Permittee shall comply with the Record keeping requirements specified in the approved trial burn or performance test plan.
- VI.B.2.f.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the LIC. All NRT monitor readings shall be recorded in the data acquisition system.

VI.B.3. Post Trial Burn Period

During the post trial burn or compliance test period, in accordance with R315-8-15.5(c)(3), and for the minimum period sufficient for the Permittee to analyze samples, compute data, and submit trial burn results, and for the Executive Secretary to review the trial burn results and make any modifications necessary to the permit, the Permittee shall comply with the conditions in this section.

VI.B.3.a. Waste Feed Limitations

VI.B.3.a.i. During any post trial burn period, the Permittee shall incinerate the chemical agent or miscellaneous waste that has been tested during the preceding trial burn, at the maximum feed rate (quantity and pounds per batch feed) demonstrated during that test. Chemical agent wastes that have successfully passed a trial burn can continue to be treated as specified in Module V, Long Term Incineration.

VI.B.3.a.ii. Only one type of chemical agent waste shall be burned in the LIC, at any given time.

VI.B.3.a.iii. Decontamination solution may be fed to the LIC secondary combustion chamber, with or without waste feed to the primary combustion chamber.

VI.B.3.a.iv. The following chemical agent contaminated liquid wastes that may be treated in the LIC primary combustion chamber at the completion of a trial burn or compliance test: Fuel Oil, Hydraulic Fluid, Lubricating Oil, Waste Surrogate Test Materials. The surrogate waste feed rate to the LIC shall not exceed the maximum amount (lbs/hr) fed during the trial burn.

VI.B.3.b. Operating Conditions

The Permittee shall not treat any hazardous waste in the LIC during the post trial burn or compliance test period unless the operating conditions in section VI.B.1.d. are in compliance.

VI.B.3.c. Waste Feed Cut-Off Requirements

VI.B.3.c.i. The Permittee shall comply with the waste feed cut-off instrument settings as specified in Table 15.8 in Attachment 15.

VI.B.3.c.ii. Hazardous wastes shall not be fed to LIC if any of the waste feed cut-off instruments listed in the specific trial burn plan fails to operate properly.

VI.B.3.c.iii. In the event of a malfunction of an automatic waste feed cut-off instrument, the Permittee shall immediately stop the hazardous waste feed to the LIC and correct the malfunction prior to resuming feed.

VI.B.3.c.iv. All instrumentation shall be maintained and tested in accordance with Condition VI.B.1.e.iii.

VI.B.3.d. Inspection Requirements

The Permittee shall inspect the LIC accordance with the Inspection Schedule, Attachments 5.

VI.B.3.e. Monitoring Requirements

VI.B.3.e.i. The Permittee shall maintain and calibrate the monitoring recording equipment as specified in Attachment 16 and 17.

VI.B.3.e.ii. Data from the CEMS, NRT and DAAMS monitors will be used to verify operating parameters and stack emissions.

VI.B.3.e.iii. The exhaust stack shall be continuously monitored, by both NRT monitors and DAAMS, at the SEL level for all agents being processed in the facility. The exhaust stack shall have two staggered NRT monitors with differing columns and two identical NRT monitors for backup, so there is one NRT detector continuously sampling the exhaust stack gases at all times whenever hazardous wastes are being fed to the furnace system. DAAMS are used as confirmation for any NRT monitor alarms above the action level. A Waste Feed Cutoff for the LIC is initiated when: 1) there is an alarm at or above the 0.2 SEL action level, or 2) when the NRT monitoring systems are not continuously sampling the stack gases.

VI.B.3.f. Record Keeping

VI.B.3.f.i. The Permittee shall comply with the Record keeping requirements in Condition II.H.

VI.B.3.f.ii. All agent monitoring equipment maintenance, calibration and test data shall be recorded and the records shall be placed in the operating record of the LIC. All NRT monitor readings shall be recorded in the data acquisition system.